

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A power supply device comprising:

a capacitor unit in which capacitors are interconnected in series or in series-parallel;

a charging unit for charging the capacitor unit at a constant current;

a detecting unit for detecting voltage on a high potential side of each capacitor;

a determining unit for determining existence of an abnormality by performing calculation based on the voltage detected by the detecting unit; and

a communication unit for outputting a determining result from the determining unit,

wherein

the determining unit ~~determines the abnormality~~ is adapted to determine that a capacitor of the capacitor unit is abnormal based on at least two of the following conditions:

a) over-voltage abnormal condition when a difference between respective voltages on the high potential side of some the capacitor and an adjacent capacitors series capacitor exceeds upper-limit voltage "Va",

b) under-voltage abnormal condition when the difference between respective voltages on the high potential side of the capacitor and the adjacent series capacitor is lower than lower-limit voltage "Vb", and/or

c) negative voltage abnormal condition when a voltage value on the high potential side of the capacitor is negative, and negative.

~~the determination is forbidden just after start of the charge of the capacitors, and the determination is started at the time when charge voltage V_c of the capacitor unit is at most a predetermined voltage value " V_d ".~~

2. (Cancelled).

3. (Original) The power supply device according to claim 1,

wherein lower-limit voltage value " V_b " is expressed by

$$V_b = V_c / (2N),$$

where " V_c " is a charge voltage value of the capacitor unit and " N " is series number of the capacitors.

4. (Currently Amended) The power supply device according to claim 1,

wherein the determination is started at the time when a unit starts determining if the capacitor in the capacitor unit is abnormal after charging has begun, and before charge voltage value " V_c " of the capacitor unit is at most exceeds a predetermined voltage value " V_d ".

5. (Previously Presented) The power supply device according to claim 1,

wherein the predetermined voltage value " V_d " is expressed by

$$V_d = V_t \times \{ 1 + (N - 1 - M) \times (1 - \text{dev}) / (1 + \text{dev}) \} - \alpha,$$

where " V_t " is a withstand voltage value per capacitor cell, " dev " is a capacity variation of the capacitors, " N " is series number of capacitors, " M " is the number of series stages including short-failed capacitors, and " α " is a detection error margin.

6. (New) The power supply device according to claim 1,

wherein the upper-limit voltage is set as a withstand voltage value per one cell of the capacitors.